

**AN ARCHAEOLOGICAL SURVEY FOR THE  
DCP MIDSTREAM THREE RIVERS PLANT TO CGP 51 PROJECT  
IN LIVE OAK COUNTY, TEXAS**



By

William E. Moore

Brazos Valley Research Associates

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AN ARCHAEOLOGICAL SURVEY FOR THE  
DCP MIDSTREAM THREE RIVERS PLANT TO CGP 51 PIPELINE PROJECT  
IN LIVE OAK COUNTY, TEXAS

BVRA Project Number 11-03

Principal Investigator

William E. Moore

Prepared by

Brazos Valley Research Associates  
813 Beck Street  
Bryan, Texas 77803

Prepared for

CSC Engineering and Environmental Consultants  
3407 Tabor Road  
Bryan, Texas 77808

2011

## **ABSTRACT**

An archaeological survey for an oil and gas pipeline in Live Oak County, Texas was performed by Brazos Valley Research Associates on April 28-30, and May 4, 2011. This study investigated both banks of the Nueces River and Olds Slough. The Area of Potential Effect was restricted to the entry and exit points on each bank of the two streams (0.42 acre). No archaeological sites were found, and no artifacts were collected. The presence of clay at the surface at each of the areas investigated is believed to be the reason that no sites were found. Copies of the report are on file at the United States Army Corps of Engineers, Galveston District, Texas Historical Commission, Texas Archeological Research Laboratory, Texas State Library, Brazos Valley Research Associates, CSC Engineering, and DCP Midstream.

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## INTRODUCTION

DCP Midstream, LP of Houston, Texas (Sponsor) proposes to install two twenty-inch pipelines in Live Oak County for the purposed of transporting oil and gas from the Three Rivers Plant to Central Gathering Point 51 (Figure 1). This project is regulated by the United States Army Corps of Engineers, Galveston District (Lead Agency), and Jerry L. Androy is the agency reviewer. William E. Moore is the Principal Investigator, and the field survey was conducted under the supervision of James E. Warren who is the Project Archaeologist. The environmental firm for this project is CSC Engineering and Consulting, and Stephen \_ . Swetish is the biologist representing this firm. The Area of Potential Effect (APE) is depicted on two USGS 7.5' topographic quadrangles. They are Comanche Hills (2898-142) and Three Rivers (2898-143) (Figure 2).

The pipes will be placed 15 feet apart and extend for a distance of 10 miles with most of the project area traversing cross-country on private property. The trenches will be 30 inches wide and have 48 inches of cover. There will be a permanent easement of 50 feet and a temporary easement of 40 feet. The proposed pipelines will cross the Nueces River, Olds Slough, and two minor tributaries. Horizontal directional boring will be used to cross the streams, and the depth of the boring will average ten feet below the bottom of each stream. The entry point for the Nueces River crossing is located 1125 feet from the north bank of the river, and the exit point is located 565 feet from the south bank of the river. The entry point for the Olds Slough crossing is located 250 feet from the north bank of the slough, and the exit point is located 92 feet from the south bank of the slough.

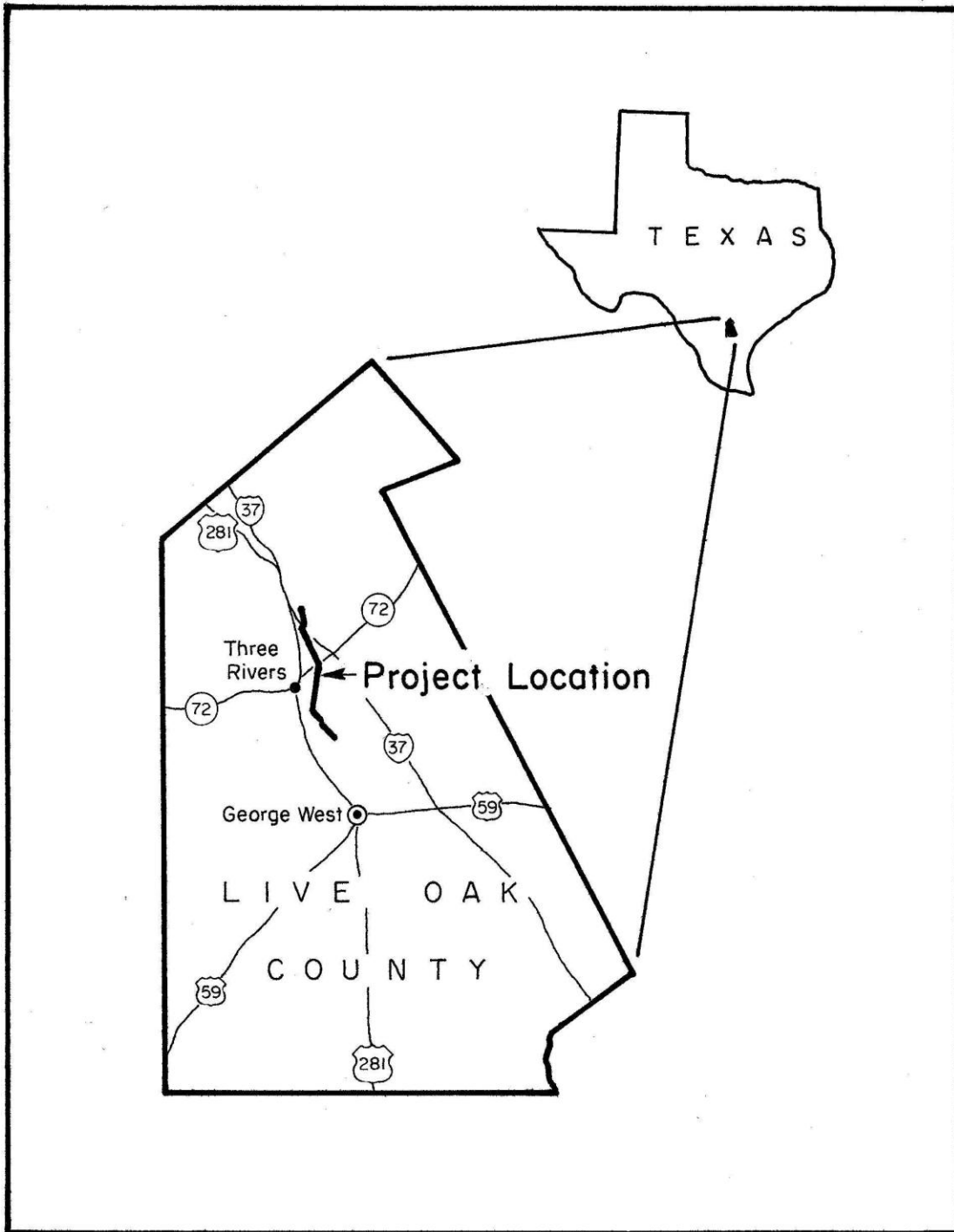


Figure 1. General Location Map



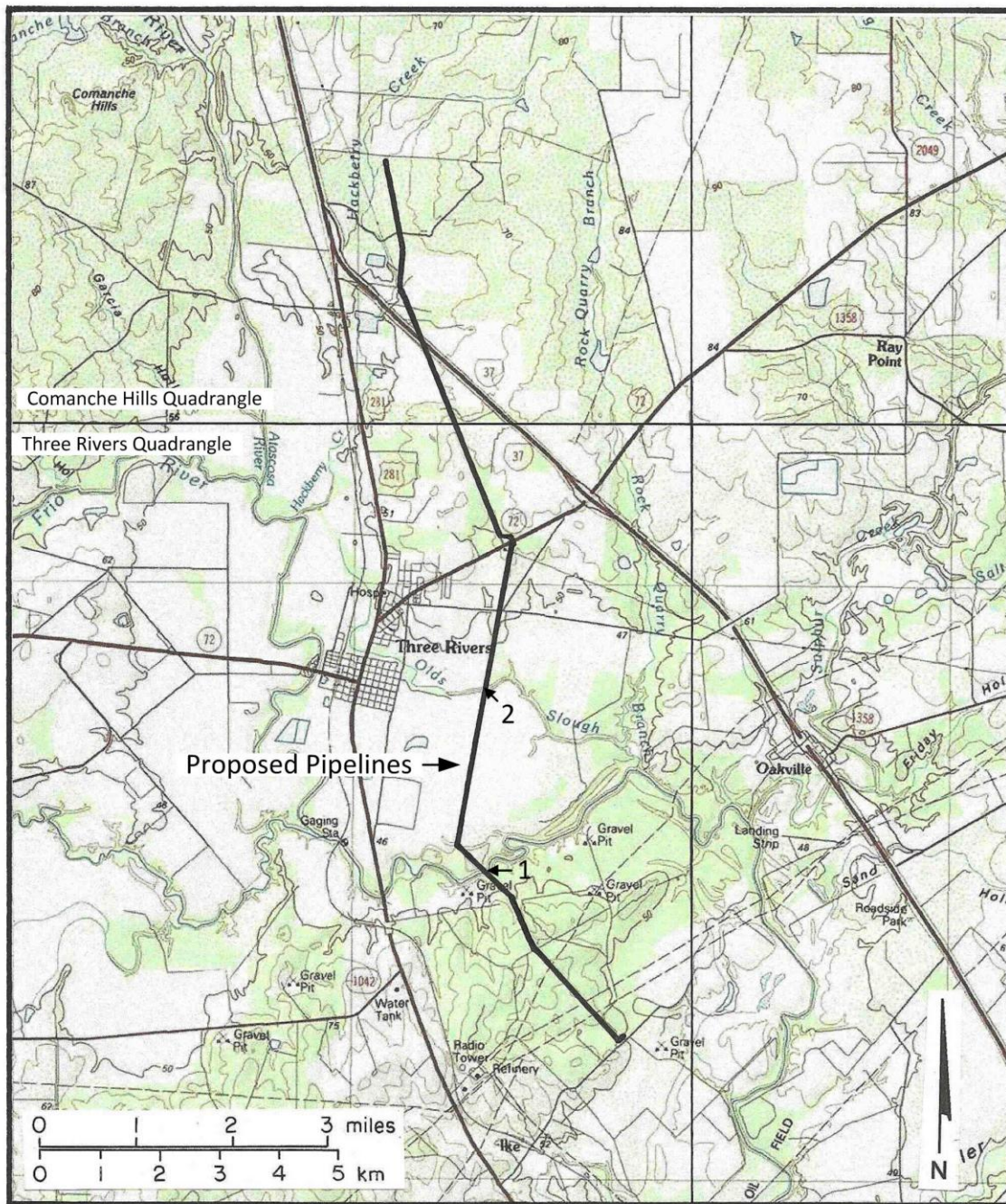


Figure 2. Project Area on Topographic Quadrangles

## METHODS

This project was performed in order to identify any cultural resources that might be present within the route of the proposed pipelines at the point where they cross the Nueces River and Olds Slough. Prior to entering the field, the site records at TARL and the Texas Archeological Sites Atlas were checked for the presence of previously recorded archaeological sites in the project area and vicinity as well as previous projects performed by professional archaeologists. The focus of this project was the two stream crossings (Nueces River and Olds Slough). The pipeline crosses other streams, but they were evaluated in the field and determined to be ephemeral and not likely to contain significant sites. Since the only areas to be disturbed at the surface are the entry and exit points for the horizontal directional boring, these are the areas that were investigated. In order to examine the subsurface to a sufficient depth, a backhoe was used and one trench was excavated at each entry and exit point. The fieldwork was documented by a sketch map at each area investigated, notes, profiles of the backhoe trenches, log of photographs taken, and digital photographs. At each backhoe trench selected samples of dirt were screened using quarter-inch hardware cloth, and the profiles of were scraped with a trowel and examined for cultural materials and features. The project involved 120 hours including pre-field tasks, the archaeological survey, and report preparation.

The following discussion presents specific methods used and dimensions for each area. Figure 3 depicts the crossings at the river and Olds slough where the investigation took place. The Nueces River crossing was designated in the field as Area 1, and Olds Slough is Area 2.

### Olds Slough Crossing

Backhoe Trench 1 was dug in thick brush at the entry point on the north bank of the slough and oriented north south (Figure 4). It was located 250 feet from the water and 50 feet from the dirt road that parallels the proposed pipeline. The trench was dug through clay to a depth of 178 centimeters below the existing ground surface. Its dimensions are 5 meters long and 85 centimeters wide. The east profile of the trench is depicted in Appendix I (Backhoe Trench Profiles), and a photograph of the trench during excavation is depicted in Appendix II entitled Backhoe Trench Photographs.

Backhoe Trench 2 was dug in thick brush at the exit point on the south bank of the slough and oriented north south (Figure 4). It was located 92 feet from the water and 50 feet from the dirt road that parallels the proposed pipeline. The trench was dug through clay to a depth of 182 centimeters below the existing ground surface. Its dimensions are 5 meters long and 85 centimeters wide. The east profile of the trench is depicted in Appendix I (Backhoe Trench Profiles), and a photograph of the trench during excavation is depicted in Appendix II entitled Backhoe Trench Photographs.



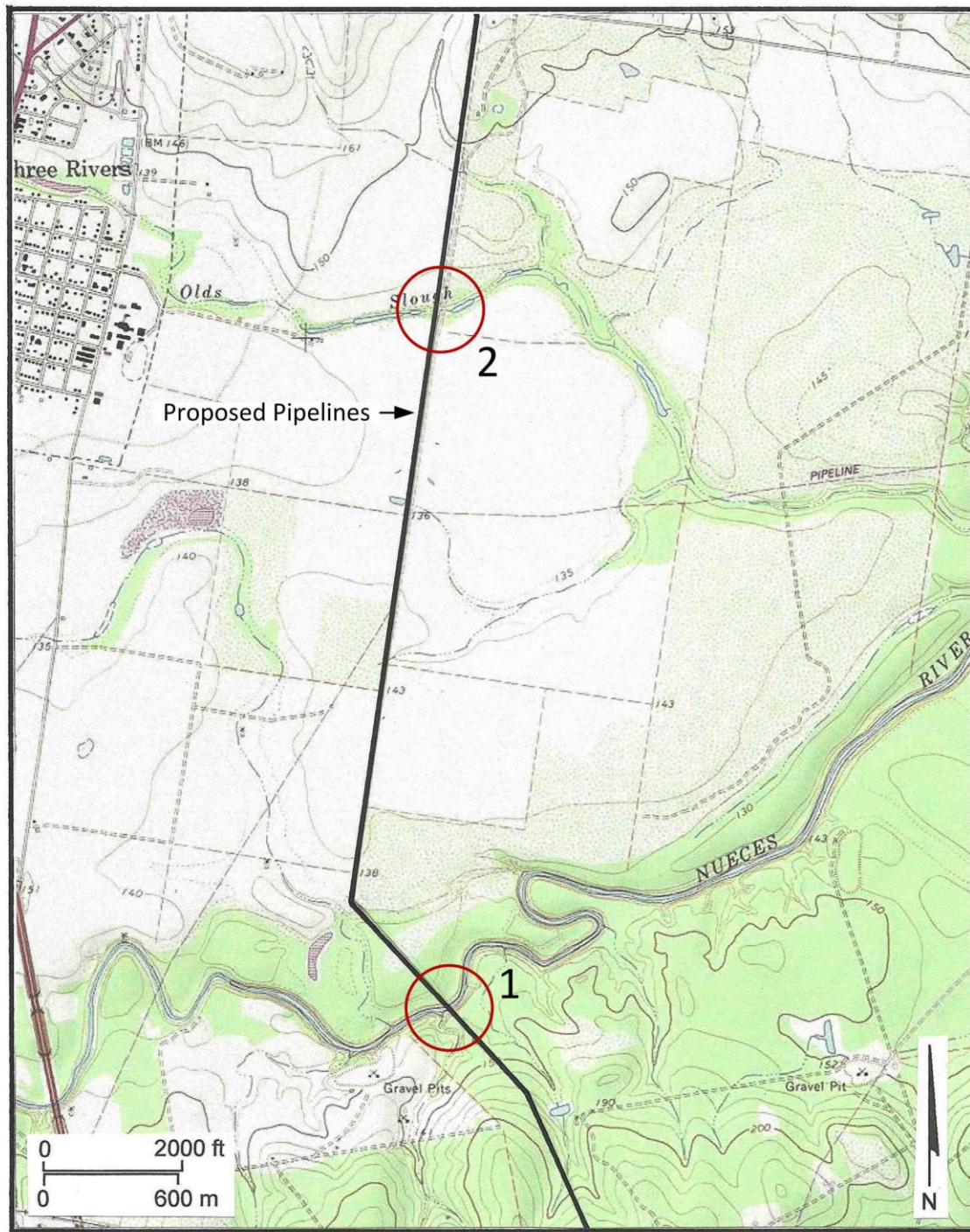


Figure 3. Areas 1 and 2

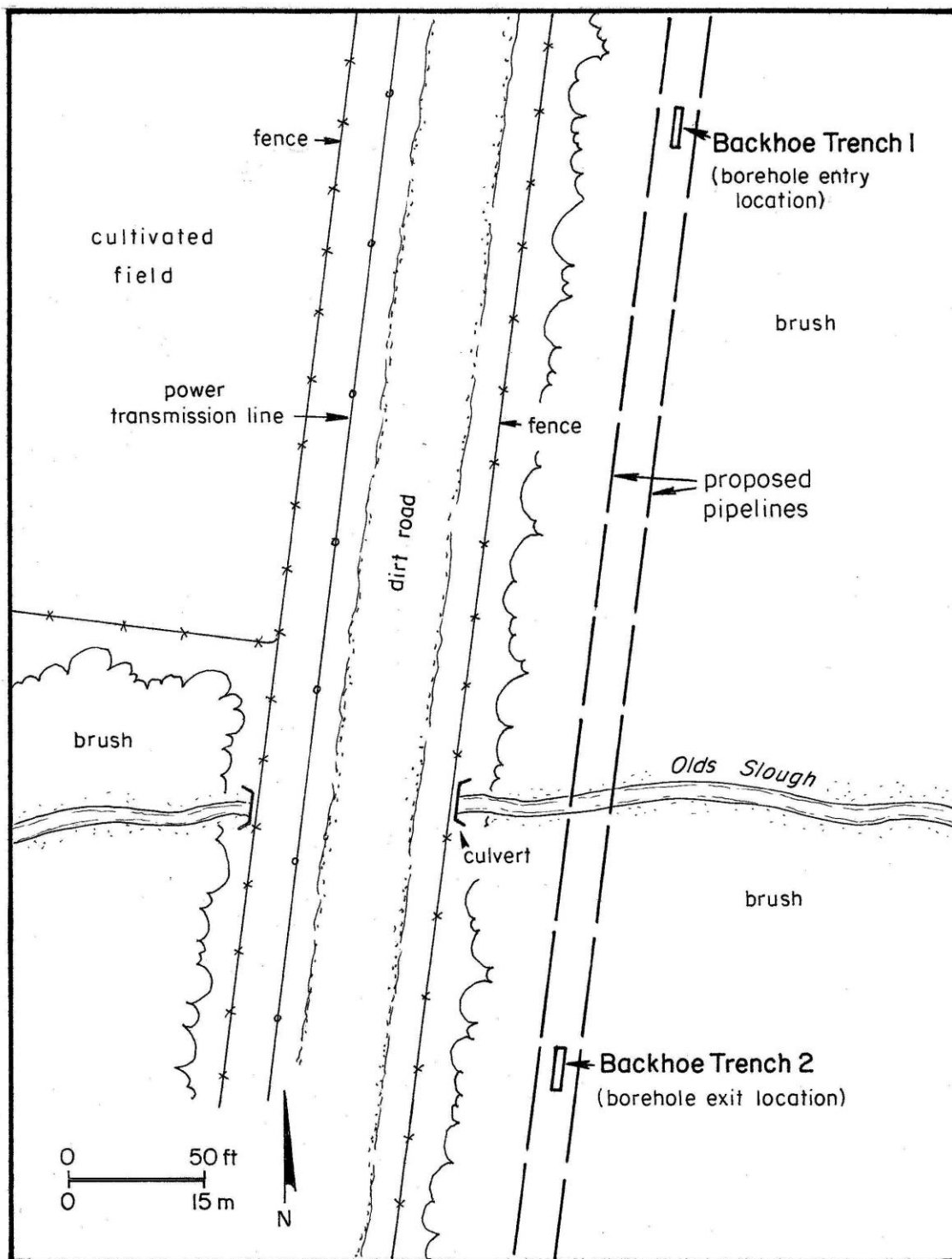


Figure 4. Backhoe Trenches 1 and 2

## Nueces River Crossing

Backhoe Trench 3 was dug in thick brush at the entry point on the north bank of the river in thick brush and oriented north south (Figure 5). It was located 1125 feet from the river and 50 feet from the dirt road that parallels the proposed pipeline. The trench was dug through clay to a depth of 170 centimeters below the existing ground surface. Its dimensions are 5 meters long and 85 centimeters wide. The north profile of the trench is depicted in Appendix I entitled Backhoe Trench Profiles, and a photograph of the trench during excavation is depicted in Appendix II entitled Backhoe Trench Photographs.

Backhoe Trench 4 was dug in thick brush at the exit point on the south bank of the river in thick brush and oriented north south (Figure 5). It was located 565 feet from the river and 50 feet from the dirt road that parallels the proposed pipeline. The trench was dug to a depth of 160 centimeters below the existing ground surface. Its dimensions are 5 meters long and 85 centimeters wide. The soil at this location is clay over caliche with two narrow lenses of calcium carbonate at 65 centimeters and 110 centimeters below the surface. When the caliche was encountered, the excavation was terminated since this soil type pre-dates human occupation. The east profile of the trench is depicted in Appendix I entitled Backhoe Trench Profiles, and a photograph of the trench during the field excavation is depicted in Appendix II entitled Backhoe Trench Photographs.

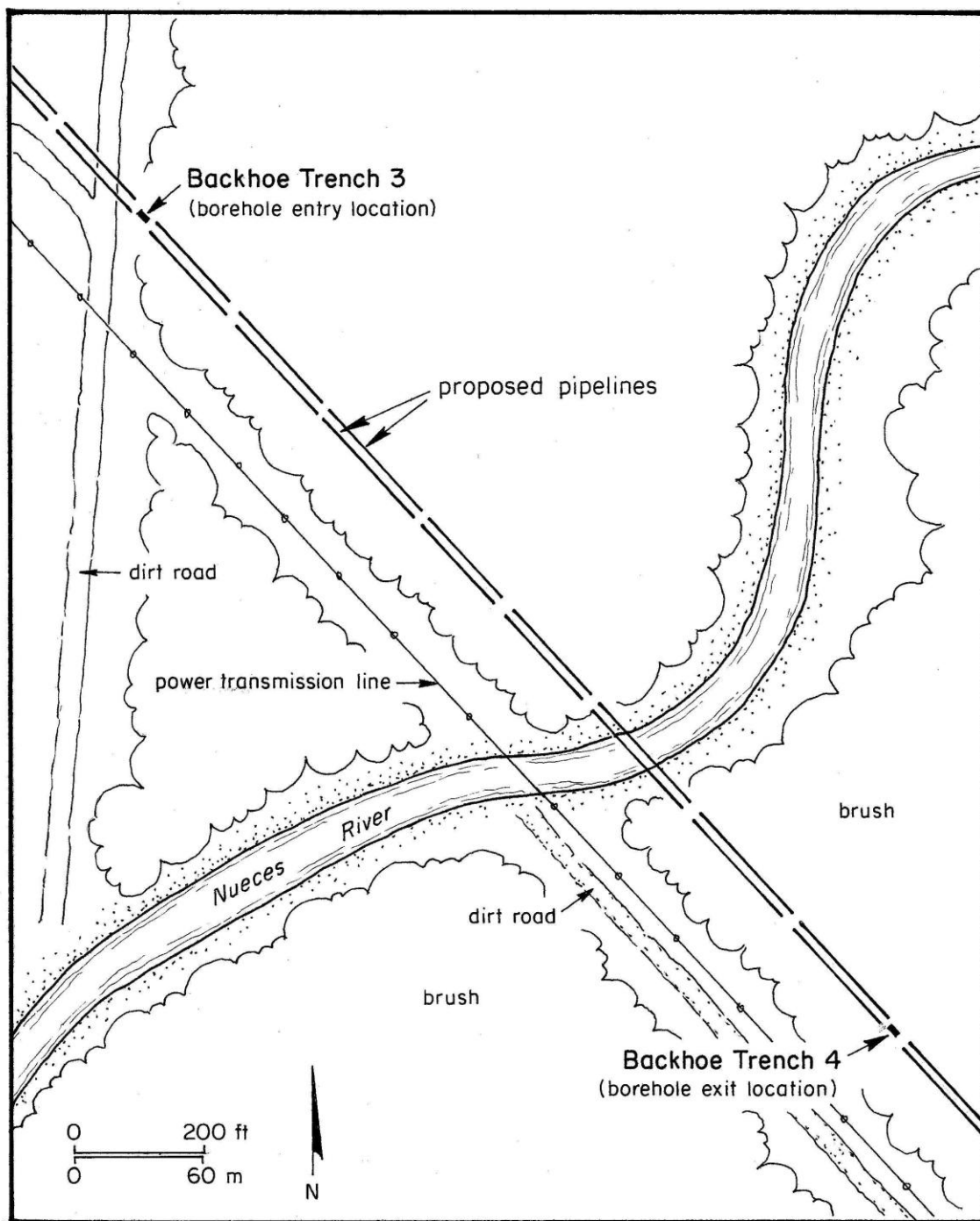


Figure 5. Backhoe Trenches 3 and 4

## **RESULTS AND CONCLUSIONS**

Examination of the files at TARL in Austin, Texas and the Atlas revealed no sites have been recorded within any portion of the APE, and no previous archaeological projects or surveys had been conducted within the area. A search for known sites within one mile of the project area identified nine sites that varied in distance from 440 meters (41LK307) to 1380 meters (41LK223). Six of the sites are prehistoric, two are historic, and there is no information for 41LK228. All of the prehistoric sites were found in localities with soils described as sandy or loamy except for two lithic procurement sites where the soils contained large amounts of gravels. Although six sites is a small sample upon which to arrive at a meaningful interpretation regarding high probability areas for prehistoric sites, it does suggest that prehistoric sites in the area are not likely to be found in areas where clay is at or near the surface as is the case in the current project area. A visual inspection of the minor streams and tributaries revealed the presence of clay at the surface, and there were no deposits of gravels that would have been suitable for making stone tools. Therefore, these areas were not considered worthy of a formal subsurface investigation. All four backhoe trenches were excavated in areas of thick brush. Figure 6 illustrates the typical vegetation encountered. Professional studies have been conducted in Live Oak County with the most notable being along the Frio River at Choke Canyon by archaeologists from The University of Texas at San Antonio (Center for Archaeological Research). Numerous significant sites were recorded and excavated, but they were located in a more favorable setting than the area investigated for this project.





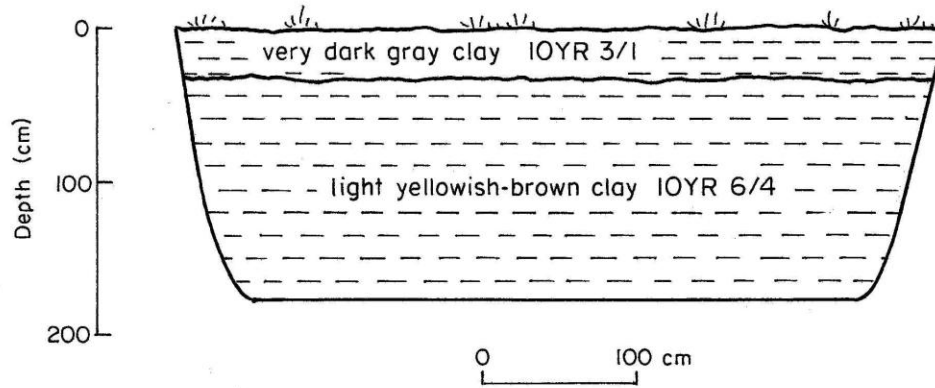
Figure 6. Thick Brush at Backhoe Trench 2

## **RECOMMENDATIONS**

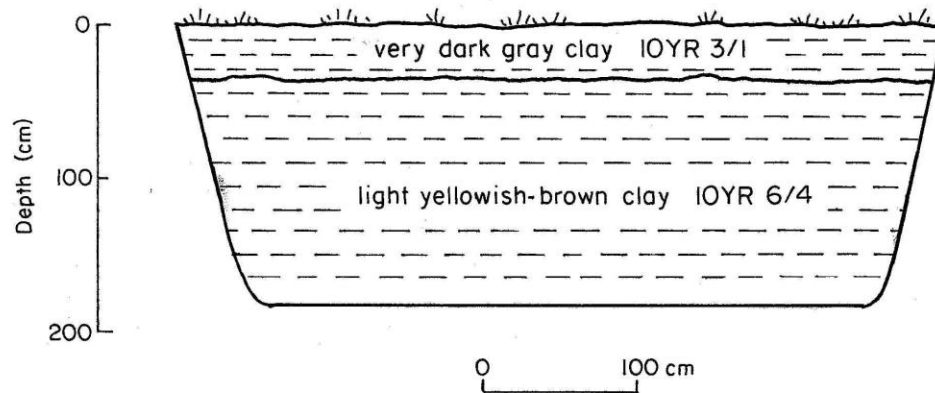
No evidence of a prehistoric or historic site was found as a result of this survey. It is recommended that the client be allowed to proceed with construction as planned. Should evidence of an archaeological site be encountered during the proposed construction, all work must stop until the regulatory agencies are notified and the situation evaluated. If the route of the pipelines is moved to another area, the regulatory agencies must be informed, as additional survey may be required. This survey was conducted in accordance with the Minimum Survey Standards as outlined by the THC.

APPENDIX I  
BACKHOE TRENCH PROFILES

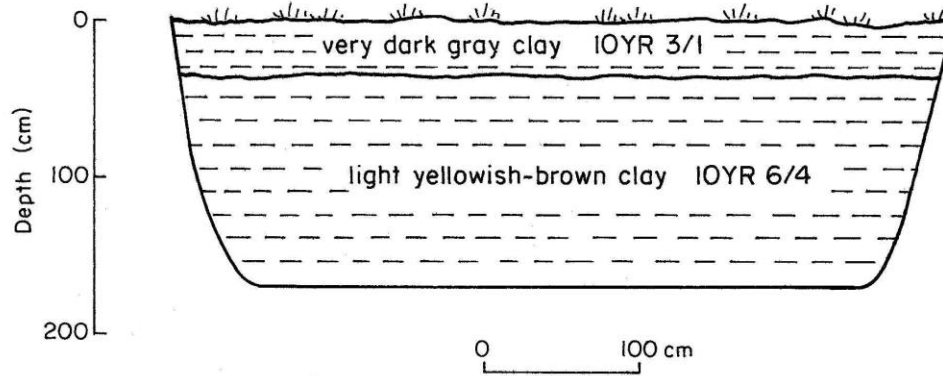
Backhoe Trench 1



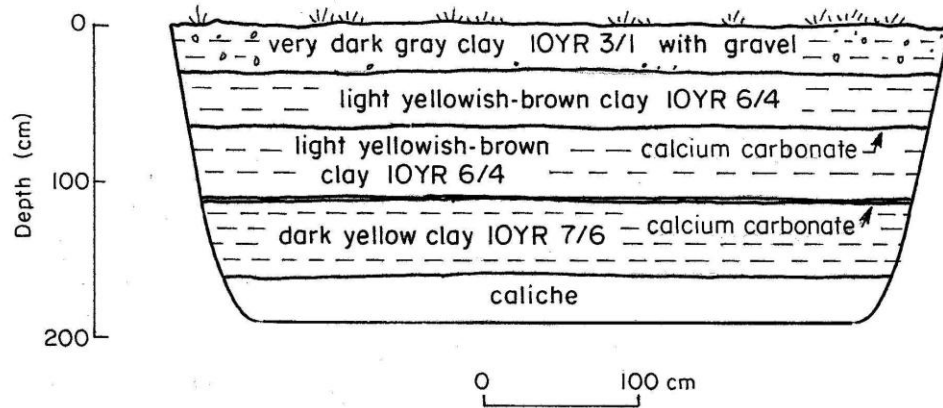
Backhoe Trench 2



### Backhoe Trench 3



### Backhoe Trench 4





APPENDIX II

PHOTOGRAPHS OF BACKHOE TRENCHES



Backhoe Trench 1



Backhoe Trench 2





Backhoe Trench 3



Backhoe Trench 4